

REISSUE PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Attention: OFFICE OF PETITIONS

Yoshio KUMADA et al.

Application No.: 10/626,553

Filed: July 25, 2003

Docket No.: 112536.98

For: SLIDING BEARING

**PETITION REQUESTING WITHDRAWAL OF
NOTICE OF INCOMPLETE REISSUE APPLICATION**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A Notice of Incomplete Reissue Application (copy enclosed) was mailed August 10, 2004 for the above-identified application. The Notice asserts that the above-identified reissue application (which is a continuation of reissue Application No. 10/210,813) was filed without a specification, claims or drawings. The Notice also indicates that a Oath/Declaration, Consent of Assignee and Assignee's Statement under 37 C.F.R. 3.73(b) also should be submitted. It is respectfully submitted that this Notice was issued in error.

This application was filed on July 25, 2003 with 11 pages (including the abstract, 5 sheets of drawings, the specification and claims 1-30) (as noted above, this application is a continuation of reissue Application No. 10/210,813, and thus this filed continuation application was a photocopy of the originally-filed reissue application), a Rule 53(b) continuation Transmittal, a Preliminary Amendment and an Information Disclosure Statement (IDS) with PTO-1449 and references. Copies of all papers as filed on July 25, 2003 (except

08/19/2004 WARDL1 00000137 150461 10626553
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for the IDS references, which are omitted here in order to simplify this filing) are attached. In addition, attached is the U.S. Patent and Trademark Office acknowledgment of receipt of the application, bearing the Patent Office's July 25, 2003 receipt date stamp, in which the Patent Office acknowledged receipt of all filed papers.¹

In addition, attached is a copy of a page dated July 25, 2003 from the Oliff & Berridge, PLC log book showing that this application was delivered to the U.S. Patent and Trademark Office on July 25, 2003, with the Rule 53(b) Transmittal, Preliminary Amendment, Reissue Application and Information Disclosure Statement.

In view of the foregoing evidence, it is respectfully submitted that this application was in fact received in the U.S. Patent and Trademark Office on July 25, 2003.

In view of the foregoing, this Petition requests the U.S. Patent and Trademark Office to accord this application the July 25, 2003 filing date because, contrary to what is stated in the August 10, 2004 Notice of Incomplete Reissue Application, the specification, claims and drawings were submitted to, and received by, the U.S. Patent and Trademark Office in view of the Patent Office date-stamped acknowledgement of receipt. Thus, the U.S. Patent and Trademark Office also is respectfully requested to rescind the Notice of Incomplete Reissue Application.

In addition, Applicant submits an executed Reissue Declaration and an executed Consent of Assignee to Reissue (37 C.F.R. §1.172(a)) and Offer to Surrender Letters Patent (37 C.F.R. §1.178). Please note that the signatory of the Consent of Assignee also confirms that he is authorized to act on behalf of the Assignee, and thus satisfies 37 C.F.R. 3.73(b).

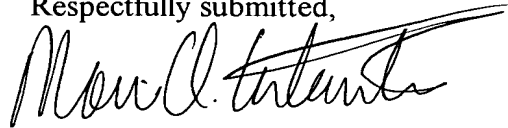
The U.S. Patent and Trademark Office is authorized to debit Deposit Account No. 15-0461 for the \$130 Petition fee under 37 C.F.R. §1.17(i). However, it is respectfully

¹ Applicants never received a return post-card from the Patent Office bearing a serial number for this application.

submitted that the Petition fee should be waived in this application in view of the evidence showing that the application was filed on July 25, 2003. The Patent Office also is hereby authorized to charge Deposit Account No. 15-0461 for the fee associated with late submission of the Reissue Declaration.

The appropriate official of the U.S. Patent and Trademark Office is invited to contact the undersigned if there are any questions relating to this matter.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Mario A. Costantino
Registration No. 33,565

JAO:MAC/ccs

Attachments:

- Copy of Notice of Incomplete Reissue Application
- Copy of Oliff & Berridge Log Book Page
- Copy of PTO Receipt for Filing Papers
- Copy of Application Transmittal
- Copy of Reissue Application
- Copy of Preliminary Amendment filed July 25, 2003
- Copy of Consent of Assignee to Reissue
- Copy of Reissue Declaration
- Copy of Information Disclosure Statement

P.S. At a minimum, the U.S. Patent and Trademark Office is requested to accord today's date to this application in view of the resubmission of the reissue application. However, for the reasons detailed above, it is respectfully submitted that this application is entitled to the July 25, 2003 filing date.

Date: August 17, 2004

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/626,553	07/25/2003	Yoshio Kumada	112536.98

Oliff & Berridge, PLC
 P.O. Box 19928
 Alexandria, VA 22320



CONFIRMATION NO. 9318

FORMALITIES LETTER



OC000000013491329

Date Mailed: 08/10/2004

NOTICE OF INCOMPLETE REISSUE APPLICATION

FILED UNDER 37 CFR 1.53(b)

A filing date has NOT been accorded to the above identified application papers for the reason(s) indicated below.

All of the items noted below **and a newly executed oath or declaration covering the items must** be submitted within **TWO MONTHS** of the date of this Notice, unless otherwise indicated, or proceedings on the application will be terminated (37 CFR 1.53(e)).

The filing date will be the date of receipt of all items required below, unless otherwise indicated. Any assertions that the item(s) required below were submitted, or are not necessary for a filing date, must be by way of petition directed to the attention of the Office of Petitions accompanied by the \$130.00 petition fee (37 CFR 1.17(h)). If the petition states that the application is entitled to a filing date, a request for a refund of the petition fee may be included in the petition.

- The specification is missing.
- The specification does not include at least one claim.
A complete specification as prescribed by 35 U.S.C. 112 is required.
- The application was deposited without drawings. 35 U.S.C. 113 (first sentence) requires a drawing "where necessary for the understanding of the subject matter sought to be patented." *Applicant should reconsider whether the drawings are necessary under 35 U.S.C. 113 (first sentence).*

The required items noted below SHOULD be filed along with any items required above. The filing date of this reissue application will be the date of receipt of the items required above.

- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- Consent of assignee is missing. 37 CFR 1.172 requires that a reissue oath/declaration be accompanied by the written consent of all assignees.
- Assignee's statement under 37 CFR 3.73(b) establishing ownership of the patent is missing. 37 CFR 1.172 requires that all assignees consenting to the reissue application establish their ownership interest in the patent by filing in the reissue application a statement in accordance with 37 CFR 3.73(b).

Replies should be mailed to: Mail Stop Missing Parts
 Commissioner for Patents

P.O. Box 1450
Alexandria VA 22313-1450

*A copy of this notice **MUST** be returned with the reply.*

Nathaniel R. Hayden

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

8 JUL 25 2003 JUL 25 2003 JUL 25 2003 JUL 25 2003 JUL 25 2003 JUL 25 2003 JUL 25 2003

35 Kumada et al; 112536-98; 53(b) Cont'd, cut 14592 (996); Pre Amdt; Re issue Appln; IDS; 1701449 w/20 n/g n trans 11/10/03



PTO RECEIPT FOR FILING OF PAPERS

Mail Room (Regular Delivery)

The following papers have been filed:

Rule 53(b) Continuation Transmittal, check no. 144592 (\$906); Preliminary Amendment; Reissue Application; IDS, PTO-1449 w/ 20 references and translation of Japanese Trial Decision

Name of Applicant: Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA

Serial No.: Rule 53(b) Continuation of Application No. 10/210,813 filed August 2, 2002

Atty. File No.: 112536.98

Title (New Cases): SLIDING BEARING

Sender's Initials: JAO:MAC/ccs

NEW APPLICATION



PATENT OFFICE DATE STAMP

**COPY TO BE STAMPED BY PATENT OFFICE
AND RETURNED BY MESSENGER**

**REISSUE PATENT APPLICATION****THE UNITED STATES PATENT AND TRADEMARK OFFICE**

OLIFF & GERRIDGE, P.C.
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400
Facsimile: (703) 836-2787

Attorney Docket No.: 112536.98Date: July 25, 2003**MAIL STOP PATENT APPLICATION**

Customer Number: 25944

**CONTINUING APPLICATION TRANSMITTAL
RULE 1.53(b)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith for filing under 37 C.F.R. §1.53(b) is a

☒ Continuation ☐ Divisional ☐ Continuation-in-Part

application of prior pending Application No. 10/210,813, filed August 2, 2002 (which is a Reissue of Patent No. 5,704,720),

For (Title): SLIDING BEARINGBy (Inventors): Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA

1. ☐ A Declaration and Power of Attorney is attached. The attached Declaration and Power of Attorney is:
- ☐ a. A copy of the Declaration and Power of Attorney from the parent application. (Used with the same or fewer inventors and (a) a copy of the prior application or (b) a revised, reformatted or edited version of the prior application that does not contain new matter.)
- ☐ b. A new Declaration and Power of Attorney. (Used with the same, fewer or additional inventors and (a) a copy of the prior application, (b) a revised, reformatted or edited version of the prior application that does not contain new matter, or (c) a new specification.)
2. ☒ The filing fee is calculated below:

**CLAIMS IN THE APPLICATION AFTER ENTRY OF
ANY PRELIMINARY AMENDMENT NOTED BELOW**

FOR:	NO. FILED	NO. EXTRA
BASIC FEE		
TOTAL CLAIMS	24 - 20	= *4
INDEP CLAIMS	4 - 3	= *1
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS PRESENTED		

* If the difference is less than zero, enter "0".

SMALL ENTITY

RATE	FEE
	\$ 375
x 9 =	\$
x 42 =	\$
+140 =	\$
TOTAL	\$

OR

OR

OR

OR

OR

OR

**OTHER THAN A
SMALL ENTITY**

RATE	FEE
	\$ 750
x 18	\$ 72
x 84	\$ 84
+280	\$
TOTAL	\$ 906

3. ☒ Check No. 144592 in the amount of \$906.00 to cover the filing fee is attached. The Commissioner is hereby authorized to charge any other fees that may be required to complete this filing, or to credit any overpayment, to Deposit Account No. 15-0461. Two duplicate copies of this sheet are attached.
4. ☒ Formal drawings (Figs. 1-8) are attached.
- ☐ Use Figure _____ for front page of Publication.

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

5. ☒ Priority of foreign application No. 6-073962 filed March 18, 1994 in Japan is claimed under 35 U.S.C. §119 and/or §365(b).
- ☒ The certified copy was filed in prior International Application No. PCT/JP95/00467.
- ☐ A certified copy of the above foreign application(s) is filed herewith.
6. ☐ Priority of U.S. Provisional Application(s) No. _____ filed _____ is claimed under 35 U.S.C. §119. (A Preliminary Amendment is attached to reflect the claim of benefit in the specification if not already present.)
7. ☒ The prior application is assigned of record to Taiho Kogyo Co., Ltd. recorded at Reel 7873, Frame 0589-590.
8. ☐ This application is filed by fewer than all the inventors named in the prior application (37 C.F.R. §1.53(b)(1)). Delete the following inventor(s) named in the prior application:
- _____
9. ☒ A Preliminary Amendment is attached. The Preliminary Amendment amends the specification to reflect the continuation data. Claims added by this Amendment are properly numbered consecutively beginning with the number next following the highest numbered claim in the application and claims canceled are identified in the listing of claims.
10. ☒ An Information Disclosure Statement is attached.
11. ☐ Small entity status:
- ☐ a. Entitlement to small entity status is asserted.
- ☐ b. Small entity status is no longer claimed.
12. ☐ Other: _____
13. ☐ This application is NOT to be published under 35 U.S.C. 112(b). The undersigned attorney or agent hereby certifies that the invention disclosed in this application has not been and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.
14. ☒ The power of attorney in the application is to James A. Oliff, Registration No. 27,075, William P. Berridge, Registration No. 30,024, Kirk M. Hudson, Registration No. 27,562, Thomas J. Pardini, Registration No. 30,411, Edward P. Walker, Registration No. 31,450, Robert A. Miller, Registration No. 32,771, Mario A. Costantino, Registration No. 33,565, Stephen J. Roe, Registration No. 34,463, Joel S. Armstrong, Registration No. 36,430, Christopher W. Brown, Registration No. 38,025, Richard E. Rice, Registration No. 31,560, Paul Tsou, Registration No. 37,956, and/or Eric D. Morehouse, Registration No. 38,565.
- ☐ a. The power appears in the attached Declaration and Power of Attorney.
- ☐ b. Since the power does not appear in the attached Declaration and Power of Attorney, a substitute Power of Attorney is also attached.
15. ☒ Address all future communications to:

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Mario A. Costantino
Registration No. 33,565

JAO:MAC/ccs



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of

Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA

Application No.: Rule 53(b) Continuation of Application No. 10/210,813 (which is a Reissue of U.S. Patent No. 5,704,720 issued January 6, 1998 (Application No. 08/553,584 filed February 26, 1996))

Filed: July 25, 2003

Docket No.: 112536.98

For: SLIDING BEARING

PRELIMINARY AMENDMENT FILED IN REISSUE APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Prior to initial examination on the merits, please amend the above-identified application as follows:

IN THE SPECIFICATION:

Col. 1, before the first line of the specification, and after the title, please insert a new paragraph as follows:

--This is one of two (2) reissue applications directed to various aspects of a sliding bearing described in U.S. Patent No. 5,704,720, which corresponds to U.S. Patent Application No. 08/553,584 filed February 26, 1996, which is the U.S. national stage of International Application No. PCT/JP95/00467, filed March 17, 1995. The first filed reissue application is Application No. 10/210,813, filed August 2, 2002. The second reissue application is the present application, which is a continuation of said Application No. 10/210,813. As noted above, this is a continuation of Application No. 10/210,813, filed

August 2, 2002, which is a reissue of U.S. Patent No. 5,704,720, which corresponds to U.S. Patent Application No. 08/553,584 filed February 26, 1996, which is the U.S. national stage of International Application No. PCT/JP95/00467, filed March 17, 1995.--

IN THE CLAIMS:

Please cancel original patent claims 6, 7, 11, 12, 16 and 17 without prejudice to or disclaimer of the subject matter contained therein.

REMARKS

Claims 1-5, 8-10, 13-15 and 18-30 are pending. By this Amendment, original patent claims 6, 7, 11, 12, 16 and 17 have been cancelled. Please note that the above-identified cancelled claims were rewritten in independent form (either by rewriting the claims in independent form or by placing their features into their corresponding independent claim) in the above-identified parent reissue application. Accordingly, the above-noted claims are cancelled so that there are no redundant claims between the present application and the parent application. Please note that claims 21-23, added in this reissue application, correspond to claims 21-23, which were added in the parent reissue application. In addition, claims 24-30 of this reissue application, correspond to claims 39-43, 46 and 47, respectively, from the parent reissue application. During prosecution of the parent reissue application, features of an objected-to claim were placed into independent claim 39. Thus, claims 24-30 of the present application are not redundant to claims 39-43, 46 and 47 of the parent reissue application.

Applicants respectfully submit that all pending claims of this reissue application are in patentable for the reasons set forth in Applicants' responses filed in the parent application.

The Information Disclosure Statement (IDS) filed herewith submits copies of all references of record from the original patent prosecution and from the prosecution of the parent reissue application, which includes a copy of JP-U-63-53922 (hereafter JP-922), along

with an English-language translation thereof. JP-922 was cited in an Opposition against the corresponding Japanese patent of U.S. Patent No. 5,704,720. A copy of a Trial Decision revoking the claims of the corresponding Japanese patent based upon JP-922 is attached hereto. Applicants respectfully submit that all claims of this reissue application are patentable over JP-922.

Examination and allowance in due course are earnestly solicited.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Mario A. Costantino
Registration No. 33,565

JAO:MAC/ccs

Enclosure:

Translation of Japanese Trial Decision

Date: July 25, 2003

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>



REISSUE PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of

Patentee(s): Yoshio KUMADA, Katsuyuki HASHIZUME,
and Soji KAMIYA

Application No.: Rule 53(b) Continuation of Application No. 10/210,813 (which is a
Reissue of U.S. Patent No. 5,704,720 issued January 6, 1998)

Filed: July 25, 2003

Docket No.: 112536.98

For: SLIDING BEARING

**CONSENT OF ASSIGNEE TO REISSUE (37 C.F.R. §1.172(a))
AND OFFER TO SURRENDER LETTERS PATENT (37 C.F.R. §1.178)**

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

The Assignee, Taiho Kogyo Co., Ltd (by Assignment recorded in the U.S. Patent and Trademark Office at Reel 7873, Frames 0589-0590), of U.S. Patent No. 5,704,720 (granted January 6, 1998) hereby consents to this reissue application.

In accordance with 37 C.F.R §1.178, Taiho Kogyo Co., Ltd hereby offers to surrender U.S. Letters Patent 5,704,720 upon allowance of this reissue application.

The undersigned hereby confirms that he has authority to sign this Consent on behalf of the Assignee.

Date: August 26, 2003

Signature: Seihachi Takahashi
Name: Seihachi Takahashi
Title: President



REISSUE PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of

Patentee(s): Yoshio KUMADA, Katsuyuki HASHIZUME
and Soji KAMIYA

Application No.: Rule 53(b) Continuation of Application No. 10/210,813 (which is a
Reissue of U.S. Patent No. 5,704,720 issued January 6, 1998)

Filed: July 25, 2003

Docket No.: 112536.98

For: SLIDING BEARING

REISSUE DECLARATION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, Seihachi Takahashi, hereby declare that:

1. I am a citizen of Japan with the mailing address and residence as stated below
next to my name.

2. I am authorized to act on behalf of Taiho Kogyo Co., Ltd., which is the
assignee of the patent identified above.

3. The title of my position with the assignee, Taiho Kogyo Co., Ltd. is President.

4. The entire title to the above-identified patent is vested with Taiho Kogyo Co.,
Ltd.

5. I believe that the above-identified patentees are the original, first and joint
inventors of the subject matter described and claimed in this reissue application and in the
above-identified U.S. Letters Patent No. 5,704,720, which issued from U.S. Patent
Application No. 08/553,584 filed February 26, 1996, which is the U.S. National Stage of
International Application No. PCT/JP95/00467 filed March 17, 1995.

6. I have reviewed and understand the contents of the specification and claims of the above-captioned reissue application and this Reissue Declaration.

7. I acknowledge the duty to disclose information which is material to the examination of this reissue application in accordance with 37 C.F.R. §1.56.

8. The priority benefits of the following application is claimed: Japanese Patent Application No. 6-073962 filed in Japan on March 18, 1994.

9. I consider U.S. Patent No. 5,704,720 to be wholly or partly inoperative or invalid by reason of the patentee claiming more or less than he had a right to claim. At least one error upon which reissue is based is described below. For example, issued claim 3 refers to a pitch of 0.2 μm between adjacent peaks, whereas the specification discloses the pitch to be 0.2 mm (200 μm). See, for example, col. 2, lines 58-61 of the patent.

10. All errors corrected in this reissue application up to the time of filing this declaration arose without any deceptive intention on the part of applicant.

11. I hereby revoke all prior powers of attorney and appoint the following as my attorneys of record with full power of substitution and revocation to prosecute this application and to transact all business in the Patent Office:

James A. Oliff, Reg. No. 27,075; William P. Berridge, Reg. No. 30,024;

Kirk M. Hudson, Reg. No. 27,562; Thomas J. Pardini, Reg. No. 30,411;

Edward P. Walker, Reg. No. 31,450; Robert A. Miller, Reg. No. 32,771;

Mario A. Costantino, Reg. No. 33,565; Stephen J. Roe, Reg. No. 34,463;

Joel S. Armstrong, Reg. No. 36,430; Christopher W. Brown, Reg. No. 38,025;

Richard E. Rice, Reg. No. 31,560; and Paul Tsou, Reg. No. 37,956.

All correspondence in connection with this application should be sent to Oliff & Berridge, PLC, P.O. Box 19928, Alexandria, Virginia 22320, telephone (703) 836-6400.

12. I have reviewed and understand the contents of this Reissue Declaration, and all statements made herein of my knowledge are true, and all statements made on information and belief are believed to be true; and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the U.S. Code and that such willful false statements may jeopardize the validity of the application or any patent reissued thereon.

Date: August 26, 2003

Seihachi Takahashi

Name: Seihachi Takahashi

Title: President

Residence: Toyota-shi, JAPAN

Address: c/o Taiho Kogyo Co., Ltd.
65, Midorigaoka 3-Chome, Toyota-shi
Aichi-ken 471, JAPAN

Patentee Name:

Yoshio KUMADA

Citizenship: JAPAN

Residence: Toyota-shi, JAPAN

Address: c/o Taiho Kogyo Co., Ltd.
65, Midorigaoka 3-Chome, Toyota-shi
Aichi-ken 471, JAPAN

Patentee Name:

Katsuyuki HASHIZUME

Citizenship: JAPAN

Residence: Toyota-shi, JAPAN

Address: c/o Taiho Kogyo Co., Ltd.
65, Midorigaoka 3-Chome, Toyota-shi
Aichi-ken 471, JAPAN

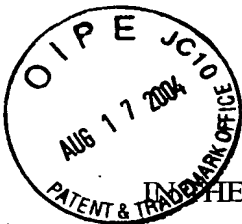
Patentee Name:

Soji KAMIYA

Citizenship: JAPAN

Residence: Toyota-shi, JAPAN

Address: c/o Taiho Kogyo Co., Ltd.
65, Midorigaoka 3-Chome, Toyota-shi
Aichi-ken 471, JAPAN



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application of

Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA

Application No.: Rule 53(b) Continuation of Application No. 10/210,813 (which is a Reissue of U.S. Patent No. 5,704,720 issued January 6, 1998 (Application No. 08/553,584 filed February 26, 1996))

Filed: July 25, 2003

Docket No.: 112536.98

For: SLIDING BEARING

INFORMATION DISCLOSURE STATEMENT

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

Pursuant to 37 CFR §1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

- ☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of this non-CPA application, OR (b) before the mailing date of a first Office Action on the merits in the present application. No certification or fee is required.
- ☒ 2. This IDS submits (i) copies of the references of record on the face of U.S. Patent No. 5,704,720, and (ii) JP-U-63-53922 (hereafter JP-922) and an English-language translation thereof. JP-922 was cited in an Opposition against the corresponding Japanese patent of U.S. Patent No. 5,704,720.

Respectfully submitted,

James A. Oliff
Registration No. 27,075

Mario A. Costantino
Registration No. 33,565

JAO:MAC/ccs
Date: July 25, 2003

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

Sheet 1 of 2

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 112536.98		APPLICATION NO. Rule 53(b) Continuation of Appl. No. 10/210,813 (Reissue of U.S. Patent No. 5,704,720 filed January 6, 1998)	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANT(S) Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA			
				FILING DATE July 25, 2003		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
		4,400,099	08-1983	Ehrentraut			
		4,538,929	09-1985	Ehrentraut et al.			
		4,561,787	12-1985	Ehrentraut et al.			
		4,606,653	08-1986	Ehrentraut et al.			
		5,071,263	12-1991	Kamiya et al.			
		5,116,144	05-1992	Kamiya et al.			
		5,238,311	08-1993	Katou et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
		385 822 B	05-1988	Austria			
		EP 0 155 257 A2	09-1985	Europe			
		EP 0 155 257 B1	09-1985	Europe			
		JP-A-60-205014	10-1985	Japan			
		JP-A-63-6215	01-1988	Japan			
		JP-U-63-30619	02-1988	Japan			
		JP-B2-63-11530	03-1988	Japan			
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EXAMINER				DATE CONSIDERED			
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Date: July 25, 2003

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 112536.98		APPLICATION NO. Rule 53(b) Continuation of Appl. No. 10/210,813 (Reissue of U.S. Patent No. 5,704,720 filed January 6, 1998)	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANT(S) Yoshio KUMADA, Katsuyuki HASHIZUME and Soji KAMIYA			
				FILING DATE July 25, 2003		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
		JP-A-2-142921	06-1990	Japan			
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21. A sliding bearing according to claim 1, in which the valley-shaped recess has a cross-sectional shape that is not exactly geometrically circular.

22. A sliding bearing according to claim 9, in which the valley-shaped recess has a cross-sectional shape that is not exactly geometrically circular.

23. A sliding bearing according to claim 15, in which the valley-shaped recess has a cross-sectional shape that is not exactly geometrically circular.

24. A sliding bearing including a plurality of axially spaced, annular continuous or discontinuous peaks which extend circumferentially on a surface of the sliding bearing which comes into sliding contact with a rotating shaft in which, as viewed in an axial cross-section, the various portions are defined on the basis of an imaginary reference line which intersects with individual peak regions, extends parallel to the axis and is determined such that the total cross-sectional area of peak regions located above the reference line is equal to the total cross-sectional area of valley-shaped recess regions located below the reference line, the top of the peak having a height ΔC above the imaginary reference line and a height as measured from the bottom of the valley-shaped recess to the top of the peak, denoted by h , the parameter ΔC being taken on an ordinate and the parameter h being taken on the abscissa in a graphical representation, the parameters ΔC and h being located within an area defined by four rectilinear lines given by the following mathematical equations:

$$\underline{h=\Delta C} \quad (1)$$

$$\underline{h=5/1.9\Delta C} \quad (2)$$

$$\underline{h=8} \quad (3)$$

$$\underline{\Delta C=1} \quad (4)$$

and wherein $\Delta C/h$ is not between 0.666 and 0.669,

in which h and ΔC are measured in unit of μm .

25. A sliding bearing according to claim 24, in which ΔC is from 1 to 8 μm .

26. A sliding bearing according to claim 24, in which the pitch is 200 μm .

27. A sliding bearing according to claim 24, in which a helical groove is formed in the sliding surface to define an annular continuous peak which extends circumferentially between axially adjacent grooves.

28. A sliding bearing according to claim 24, in which a plurality of annular grooves are formed in the sliding surface to define a plurality of annular peaks which extend circumferentially between axially adjacent annular grooves, adjacent peaks being discontinuous from each other.

29. A sliding bearing according to claim 24, in which the valley-shaped recess has a cross-sectional shape that is not exactly geometrically circular.

30. A sliding bearing according to claim 24, in which $h < 3$.